

This species is closely allied to *Pupina ventrosa*, Dohrn ; it is, however, larger and more inflated, the peristome is continuous forming a raised ridge on the body whorl, and the auricles are more thickened.

MONDAY, 29TH MAY, 1876.

WILLIAM MACLEAY, ESQ., PRESIDENT, in the Chair.

The following Donations were announced.—

Proceedings of the Royal Society of New South Wales for 1874, by the Society ; Part I. of Catalogue of Birds Australian Museum, by the Curator ; Vols. 1, 2, 3, and 4 of the Proceedings of the Zoological and Acclimatisation Society of Victoria, by the Society ; six published papers on the "Structure of Teeth," thirteen on the "Microscopical Structure of Fossil Teeth," and a list of Palæozoic Fishes, by the author, W. J. Barkas, M.R.C.S.E.

NEW MEMBER PROPOSED.

Mr. W. J. Barkas, Surgeon, Bombala.

MEMBER ELECTED.

Mr. William Macdonnell.

The following papers were read :—

THE ARANEIDES OF THE "CHEVERT" EXPEDITION,

BY H. H. B. BRADLEY, ESQ.

(See plates.)

PART I.

CLASS CONDYLOPODA, *Labrellie*.

SUB-CLASS ARACHNIDA.

ORDER ARANEIDEA.

I. ORBITELARIE.

1. EPEIRIDES.

A. EPEIRINES.

GASTERACANTHA, *Sund.**G. variegata*, *Walck.*

Plectana variegata Walck His. Nat. des Ins. Apt. vol. 2, p. 160.

G. variegata L. Koch Arach. Aust., p. 2, pl. 1, fig. 1.

Five females from Palm Island, Cleveland Bay; one female from Katow, New Guinea; the specimens described by Walcknaer are from Port Dorey, New Guinea.

G. minax, *Thor.*

G. minax. Thor. nya exostisca Epeirider in oefvers of kongl. bet akad Forhandl xv., 1857, p. 301.

G. minax. Thor. kongl. Svenska Fregatten Eugenic Resa Zool. Arach. 1, p. 21, 1865.

G. minax L. Koch Arach. Aust., p. 10.

G. flavomaculata Keyserling Beitr. zur kenntn. den orbitelæ in dem verhandl der k. k. Zool. Bot. Gesellschaft in Wien xv., p. 801, t. xix., f. 819.

Two females from Percy Island. The specimens described by Dr. Koch are from Sydney, where this species is tolerably common.

G. suminata, *L. Koch.*

G. suminata L. Koch Arach. Aust., p. 11, p. 1, f. 7.

Two females much damaged, from Hall Sound. The specimens described by L. Koch are from Viti Levu.

G. sacerdotalis, *L. Koch.*

G. sacerdotalis, L. Koch Arach. Aust. 198, f. 1.

Six females (one immature) from Percy Island; one female from Cape York. The specimens described by Dr. Koch are from Bowen.

G. crucigera, *N.S.*

Cephalothorax as long as broad, glabrous, blueish-black above mandibles, same colour; fangs, reddish-brown; maxellæ and labium, reddish-brown, lighter towards the tips; sternum, reddish-brown, with a single white (yellowish) spot corresponding to each leg, also a similar spot at the posterior part; legs, yellowish-brown, gradually darker towards the claws.

Abdomen glabrous, twice as broad as long, triangular, the apex being in front furnished with six spikes, of which two—very strong—form the angles at the base of the triangle; these are orange colour tipped with black: two other spikes—black—are placed nearly one-third of the distance from the former to the apex of the triangle; the remaining two, also black, are placed in the base of the triangle, and are each about twice as far from the first-mentioned pair as they are from one another. The remaining upper surface of the abdomen is greyish yellow with two broad reddish-black stripes extending along the sides from near the apex of the triangle to the base of the first-mentioned spikes; there are four small round punctured spots on each of these stripes, the centre of each spot being raised; below these stripes are corresponding yellow stripes. There are two short dark stripes in prolongation of the large spikes, on each of which are two punctured spots similar to those above-mentioned; down the centre there is a fine dark line with a cross line about one-third of its length from the anterior part forming a cross; between the anterior parts of the latitudinal stripes are two spots similar to those described above, at the ends of the arms of the cross are two more, and between these and the cross stripes are two more; below these stripes are four very minute spots placed transversely, the underside is reddish-brown covered with small yellow spots. Length and breadth of cephalothorax, 1 line; length of abdomen, $2\frac{1}{2}$ lines; breadth, exclusive of spikes, 5 lines; these (the lateral posterior spikes) are 1 line in length, the front pair about half that length.

This species is from Hall Sound, New Guinea, where it seems very numerous, there being 31 specimens (females, three immature). There is but little variation, except that the black stripe along the sides of the abdomen varies in width.

THOLIA, *L. Koch.*

This very interesting genus was founded by Dr. L. Koch on specimens in the Museum Goddeffroy, and the Museum in Vienna, and placed by him among the Orbitelariæ. I have myself caught specimens of two different new species of this genus, and in neither case did I find any web. My own experience is that neither Tholia,

Cystarachne, nor Cœkenia (Thlaosoma) build any web; the two latter genera I had opportunities of watching during weeks, when I have almost day after day found them occupying a position on the lower side of a leaf (magnolia or loquat) where, if they had any web, I must have seen it. These genera may all be obtained by beating branches of trees over an umbrella or cloth. I have found Tholia in Sydney and at Mount Victoria, 3000 feet above the sea.

THOLIA Macleayi, N.S.

Cephalothorax, dark reddish-brown above a deep furrow separating the caput; abdomen projecting over the cephalothorax as far as the second pair of legs where there is a slight transverse band of greyish hairs; mandibles, reddish-brown, fangs being slightly darker; maxillæ yellowish red tipped with fawn; labium red; sternum, reddish-brown; palpi same colour moderately furnished with short hairs.

Legs, 1st, 2nd, and 4th pairs have the coxal and exinqual red; femoral red, tipped with dark reddish-brown, genual dark reddish-brown; tibial, light reddish-brown with dark transverse bands in the centre and at the tip; metatarsi light reddish-brown; tarsi darker; the 3rd pair is the same colour without the dark bandings.

Abdomen of a generally triangular form, the base being in front, tuberculated or furrowed above, and of a reddish brown colour, the prominent marking being two dark spots, each about equidistant from the side to the centre of the abdomen; between these is a lighter coloured space, having in its centre a longitudinal line of four small tubercles, on either side of which (at the front of the abdomen) is a round depression with a minute tubercle in its centre; next come two elliptical depressions; then at the side are three round depressions; placed between these and the dark spots before mentioned are two small round depressions; about midway from the lower of the three lateral depressions to the point of the triangle is a moderate-sized tubercle; at the termination of the central line of tubercles, are five transverse furrows of a darker colour, having ridges more or less tuberculated between them

Below, the part immediately around the vulva is of a yellowish red, vulva being dark reddish brown; spiracular plates are also marked by two curved dark lines; below these the colour is dark brown, almost black; the sides curve over a little, and under this curve is a line more or less broken into spots of silvery white.

Length of cephalothorax, 2 lines; breadth, $1\frac{1}{2}$ lines; length of abdomen, 3 lines—but it projecting one line over the cephalothorax, leaves total length 4 lines; breadth of abdomen, 4 lines.

This species is from Palm Island, Cleveland Bay, there being but one specimen—a female.

ARGIOPE, *Sav. and Aud.*

A. regalis, *L. Koch.*

A. regalis, *L. Koch*, *Arach. Aust.*, p. 36, pl. iii., fig. 4.

Two females, one immature (!) from Cape York; one female, from Katow, New Guinea; one female from Percy Island; one female (immature) from Barnard Island, varies in having the bandings of the legs very distinct, the light marking being a light yellow, the dark bands being a dark reddish brown; in an immature female from Cocoanut Island, the leg marks are very indistinct, and the first band on the abdomen is broken into three distinct spots; the second band is very indistinct, with four spots of a lighter colour.

The type specimens are from Port Mackay.

A. picta, *L. Koch.*

A. picta, *L. Koch*, *Arach. Aust.*, p. 36, pl. iii., fig. 3.

One female from Hall Sound, New Guinea; one female from Katow. *Dr. Koch* describes specimens from Port Mackay.

A. variabilis, *N.S.*

This insect, in its shape and colour closely resembles *A. regalis*. The cephalothorax, however, is longer than broad— $3\frac{1}{2}$ lines long, 3 broad; the different parts of the mouth and the sternum are, in shape and colour, as in *A. regalis*.

Legs reddish, with dark brown bands embracing the coxal, exin-
quinal, the lower and upper parts of the femoral, the whole of the
genual, the lower and upper parts of the tibial and of the metatar-
sus, and the whole of the tarsus; the legs are tolerably well fur-
nished with hairs and spines throughout.

Abdomen 5 lines long, 4 broad; above of a dark reddish brown,
with three broad bands of yellowish white; the first, from the
front, leaves a narrow space of dark reddish brown in front; between
the three bands are two spaces, each as broad as the light bands,
the last band being at the broadest part of the abdomen, and ter-
minating between two lateral tubercles of moderate size; below
this band the dark colour is broken by two almost imperceptible
bands of a lighter shade of brown, immediately above each of
which are five minute equidistant white spots, extending across the
abdomen; immediately below each of the two upper, and upon the
lower bands, are two pits, the centre pair being much largest and
deepest; on the under side are two yellowish white bands, extend-
ing from the epigyne beyond the spinnerets; these are slightly
broadest at the upper part, and narrowest about the centre, where
they are crossed by a long white spot; epigyne nearly black, the
part above it being yellowish white; below the epigyne, and
within the lines, the colour is dark brown, yellowish in the centre,
where are six long-shaped transverse white spots, arranged in
pairs; immediately above the spinnerets is a longitudinal strip of
yellow.

Spinnerets yellowish brown; outside the lines the colour is dark
brown, marked with white or yellowish spots.

This species comes very close to *A. regalis*, but the lateral tuber-
cles, and the markings on the underside of the abdomen, lead me
to consider it a separate species, and not a variety. Two speci-
mens—from Darnley Island and Sue Island, Torres Straits; a
specimen from Cocoanut Island shows the second transverse
band on the upper side of the abdomen broken into four distinct
spots; the third band is darker in parts, seeming at first sight,
also, almost like four spots; the underside is the same, but the
longitudinal lines are slightly broader. A specimen from Darnley

Island, I believe, also belongs to this species; the ground colour of the abdomen is much lighter, and the second and third lines, broken into spots, are rather indistinct; other specimens, from Warrios and Sue Island, gradually merge the three transverse bands, until in some specimens (from Cocconut, Darnley, and Sue Islands, and from Hall Sound) the three bands become one white patch, covering the whole of the upper side of the abdomen as far as the second pair of lateral tubercles; the markings on the underside vary but slightly, and only in respect of the lines and spots being more or less distinct, the general form being traceable in all. I have felt great difficulty in dealing with this species, but the specimens run so much one into the other as to convince me of their being but varieties. All the specimens are females.

A lunata N.S.

Cephalothorax about as long as broad, and otherwise closely resembling *A. regalis*. The parts of the mouth are also similar, but the palpi are light yellowish colour, with darker bands at the upper part of cubital and radial; the sternum is bright golden yellow. Below the sternum is a small spot of the same colour.

Legs of a reddish-brown colour, the first and second pairs with bands of silvery hairs, two on the femoral, and one on the tibial; in the third and fourth pairs these only appear in the tibial.

Abdomen above of an uniform dark-brown, with one transverse half-moon shaped white band at the front part, the points being towards the front; on the underside, dark reddish-brown, with two white bands broken into spots, extending from the epigyne, past the spinnerets, which are a lighter colour; in the centre of the space are three oblong white spots, placed longitudinally, and six oblong white spots, placed transversely in pairs, between the outer and centre lines; towards the sides the colour gradually changes to a light greyish brown, with minute spots of a darker colour.

Two specimens, from Sue and Cocconut Islands, Torres Straits, show but little variation—that from Sue Island being slightly darker.

A. protensa, L. Koch.

A *protensa* Koch Arach. Aust., p. 211, pl. xviii., fig. 8.
One female, from Cape Grenville, much damaged, seems to belong to this species; the type specimen is from Bowen.

EPEIRA, Walck.

1ST GROUP.

E. trigona, L. Koch.

E. trigona Koch Arach. Aust., p. 50, pl. iv. fig. 1.
One female from Hall Sound, New Guinea. The specimens described by L. Koch are from Port Mackay, Queensland.

E. biapicata, L. Koch.

E. biapicata L. Koch, Arach. Aust., p. 54, pl. iv. fig. 4.
Two females, from Katow, and four females from Darnley Island. The specimens described by L. Koch are mentioned merely as from New Holland.

E. producta, L. Koch.

E. producta, L. Koch, Arach. Aust., p. 55, pl. iv., figs. 5, 6, and 7.

Two very young female specimens from Hall Sound, and a specimen from Percy Island (female), immature, and so damaged as to be almost undistinguishable; seem to belong to this very variable species. The specimens described by Dr. Koch are from Brisbane, Rockhampton, Sydney, and New Holland; the latter would, perhaps, be the best habitat to give, as this species is, to my knowledge, found from Sydney to Cape York.

4TH GROUP.

E. mangareva, L. Koch.

E. mangareva, L. Koch, Arach. Aust. p. 85, pl. vii., fig. 4 and 5.

Five females, one immature, from Hall Sound; six females, from Percy Island; one male from Hall Sound; a male, immature, and a female, from Katow. The specimens described by Dr. Koch are from Port Mackay, Bowen, Tonga, Fiji, Upolu, Rorotonga, and New Holland.

E. maritima, *Keys*.

E. maritima, E. Keyserling, Bertrage zur kenntn. der Orbitelæ in dem Verhanl, der k-k, zool-bot. Gesellschaft zu Wien Jahrg, 1865, p. 813, T. xviii, figs. 22 and 23.

E. maritima, L. Koch, Arach. Aust., p. 91.

E. cylindroides (?) Walck Hist. Nat. des Ins. Apt., vol. II. p. 136.

Three females from Hall Sound ; two females from Cocoanut Island ; two females from Warrior Island ; and one female, each, from Katow, Sue Island, and Bet Island. L. Koch refers to specimens from Pelew, Fiji, and Bowen. The colour varies a little in shade in the different specimens, and the bandings on the legs are very distinct in some young specimens. There is also a young specimen (female) from Sue Island, which approaches closely to this species ; the pattern on the upper and lower sides of the abdomen is different : the legs are much slighter, and, altogether, the insect seems to belong to a different species, but it is much too immature to be described with safety.

E. Macleayi, *N. S.*

Cephalothorax much longer than broad, the caput being high ; the four centre eyes are very close together ; the laterals at the sides of the caput are also close to one another ; colour of cephalothorax dull yellowish red, the caput being a light reddish yellow ; legs palpi sternum and mandibles same colour, fangs red.

Legs moderately long—first pair, 3 lines long ; abdomen oval, fawn colour, covered closely with minute silvery hairs, with 8 pits, in 2 longitudinal lines ; between these lines is a longitudinal line of faint white ; the abdomen slightly overlaps the cephalothorax.

Length of cephalothorax, $1\frac{1}{2}$ lines ; of abdomen, 2 lines : total length, 3 lines ; one female, from Hall Sound. There is, also, apparently, another specimen, from Percy Island, but so damaged as to be indistinguishable.

5TH GROUP.

E. Mastersii, N. S.

Cephalothorax longer than broad; the general form of cephalothorax, mandibles, maxillæ, and sternum, closely resemble *E. Graeffii*, to which this species is closely allied; colour, light reddish yellow, with a dark band on each side of the caput; mandibles, reddish; fangs, reddish-brown; legs moderately long, same colour as cephalothorax, maxillæ same colour.

Abdomen, slightly overlapping the cephalothorax, oval, slightly wider at the posterior part; above of a light yellowish grey, with two longitudinal lines of brown spots of a half-moon shape, posterior brown; the underside is of the same yellowish grey colour; the part between the epigine and the spinnerets being a brown shield-shaped spot; on each side are three long brown accentuate spots.

Length of cephalothorax, $1\frac{1}{2}$ to 2 lines; of abdomen, 2 to $2\frac{1}{2}$ lines; total, 3 to 4 lines.

A female from Percy Island; five females and two males (one immature) from Cocoanut Island; two females and a male from Sue Island; two females from Cape Grenville.

The male is coloured and marked as the female; the only difference is, that it is smaller and proportionately slighter. The specimens vary but very little.

6TH GROUP.

E. pthisica, L. Koch.(?)

E. pthisica, L. Koch, Arach. Aust., p. 103, pl. viii., fig. 5.

An immature female from Hall Sound seems to belong to this species, which was first described by Dr. Koch from specimens from Port Mackay, Queensland.

10TH GROUP.

E. strangulata, L. Koch.

E. strangulata, L. Koch, Arach. Aust., p. 118, pl. ix., fig. 6.

Ten females from Hall Sound, and one from Darnley Island, varying very much in colour and pattern of marking. I have with

great hesitation referred to this species, though it is possible that examination of a larger number of specimens may show two species, particularly with regard to a damaged specimen from Hall Sound, the cephalothorax of which is light yellow, marked with a brown longitudinal central band, and two brown lines marking the caput. But, with only one damaged specimen of this type, I have not felt justified in forming a new species. The general form of the cephalothorax and parts, and the marking of the legs, being the same as the other specimens. The type specimens are from Viti Levu and Upolu.

11TH GROUP.

E. caudata, N.S.

Cephalothorax cordate, as long as broad; caput high, narrow, and tolerably distinct, covered with short hairs; color of cephalothorax grey; legs and palpi moderately short, yellowish grey, banded with brown; mandibles reddish brown; maxillæ yellowish grey; sternum oval, reddish brown.

Abdomen rounded in front and gradually broader, nearly as far as the spinnerets (half its length), after which it suddenly contracts into a tail; colour above greyish; the underside, as far as the spinnerets, is a dark brown, with a white spot above and another below the epigyne, and two white spots or lines enclosing a cordate; spot of brown extending nearly from the epigyne to the spinnerets these last white spots are narrowest in the centre; the remainder of the underside grey.

Length of cephalothorax, $1\frac{1}{2}$ lines; of abdomen, 4 lines.

One female from Hall Sound. This is quite a new form of the tailed Epeiras, and should perhaps form the type of a new group, the cephalothorax and caput being very different from those of the other species forming this group.

EBAEA (*L. Koch.*)*E. præcincta* L. Koch.

E. præcincta L. Koch., *Arach. Aust.*, p. 130, pl. x., fig. 2.

One female (? mature) from Palm Island. The species described by Dr. Koch are from Samoa.

META (*G. Koch.*)*M. granulata* Walck.

Tetragnatha granulata Walck Hist. Nat. des Ins. apt iii., p. 222. *Tetragnatha granulata*, L. Koch Beschrieb neuer arach. und myr. in den verhandl. der k. k. zool bot Gesellschaft zu Wien Jahrg, 1867, p. 185. *Meta granulata* Koch, arach. aust., p. 136, pl. 10, fig. 5.

One female from Percy Island; three females from Hall Sound. These specimens show a gradual disappearance of the dark markings on the upper side of the abdomen. One female from Bet Island seems to belong to this species, but it is too crushed for certain recognition.

M. decorata Blackw.

Tetragnatha decorata Blackw. ann and mag. Nat. Hist., July, 1864.

Tetragnatha decorata Camb. Linnean Soc.'s Journal Zool., vol. x., p. 389, pl. xiii., figs. 61 to 68.

Meta decorata L. Koch, Arach. Aust., p. 141, pl. xi., fig. 5.

Two females from Hall Sound. The specimens previously described are from Bombay, Ceylon, Bowen, and Port Mackay.

M. striatipes, *N.S.*

Cephalothorax longer than broad, yellowish grey above; caput marked by a furrow; about the same height as cephalothorax; mandibles, maxillæ, and labium brownish red; sternum yellowish grey; legs yellowish grey, with a black band at the genual and lower end of the tibial, brownish grey towards the tarsi; the third pair want the dark bands.

Abdomen long, narrow, high in front, where it is widest, and extending but a short distance beyond the spinnarets; silvery grey above, with a light brownish-grey longitudinal mark extending half way down the centre; sides same colour, with two longitudinal marks of silver grey; under side light grey.

Length of abdomen, 4 lines; of cephalothorax, 1 line.

NEPHILA, *Lench.**N. venosa*, *L. Koch.*

N. venosa L. Koch Beschrieb, *Neur Arach. and Myr.* in den verhandl der k. k. Zool. Bot., Gesellschaft zu Wien, 1867, p. 183.

N. venosa, L. Koch. *Arach. Aust.*, p. 148, pl. xii., fig. 1.

Females from Cape York, Hall Sound, Coconut Island, New Guinea; the type species are from Rockhampton, Brisbane, Port Mackay, and Ovalau.

N. nigratarsis, *L. Koch.*

N. nigratarsis L. Koch, *Arach. Aust.*, p. 152, pl. xii., fig. 4

Females from Warrior Island, Hall Sound, New Guinea, Long Island, Cape Grenville; the type specimens are from Rockhampton and Port Mackay.

N. fuscipes, *C. Koch.*

N. fuscipes, C. Koch, *die Arach. Bd. vi.*, p. 136, T. ccxii., fig. 528.

Epeira fuscipes, Walck, *Hist. Nat. des his., Apts.*, T. ii., p. 97, N. 89.

Nephila fuscipes, L. Koch, *Arach. Aust.*, p. 156, pl. xiii., fig. 1.

Females from Darnley Island, Cape Grenville, Cape York, and Hall Sound. Dr. Koch mentions this species as found at Pelew Island, Port Mackay, Rockhampton, Bowen, and Port Denison.

N. imperatrix, *L. Koch.*

N. imperatrix, L. Koch, *Arach. Aust.*, p. 159, pl. xiii., fig. 3.

Females from Cape York and Percy Island; the type specimens are from Port Mackay, Rockhampton, and Bowen. I have myself found this species near Sydney.

N. procera, L. Koch.

N. procera, L. Koch, Arach. Aust., p. 162, p. xiv., fig. 1. Females from Palm Island, Katow, and Hall Sound, the latter are the largest insect, but I cannot distinguish them from this species; the type specimens are from Port Mackay and Bowen.

TETRAGNATHA, Latr.

T. ferox, L. Koch.

T. ferox, L. Koch, Arach. Aust., p. 173, pl. xiv., f. 415.

Two females from Katow; the types are from Bowen, Port Denison, Port Mackay, and Rockhampton.

T. cylindrica, Walck. (?)

T. cylindrica, Walck. His. Nat. des Insectes Apt., T. ii., p. 210.

T. cylindrica, E. Keyserling Beitrage zur Kenntniss der Orbitilæ in dem verhandl der k. k. Zool. bot., Geselsch zu Wien, Jahrg., 1865, p. 842, T. xx., f. 18 and 19.

T. cylindrica, L. Koch, Arach. Aust., p. 18, p. xv., fig. 3.

One female from Hall Sound. Dr. Koch describes specimens as from Sydney.

T. bituberculata, L. Koch.

T. bituberculata, L. Koch, Beschrieb, nuer Arach. und Myr in den verhandl der k. k., Zool. bot., Geselsch zu Wien, Jahrg., 1867, p. 184.

T. bituberculata, L. Koch, Arach. Aust., p. 183, pl. xv., fig. 5.

Two females (one immature) from Katow; the specimens described by L. Koch are from Rockhampton, Bowen, Brisbane, Port Denison, and Port Mackay.
